SEQUENCE LISTING |

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<120> A METHOD FOR IDENTIFICATION AND/OR DIAGNOSIS OF REM SLEEP LOSS FROM BLOOD SAMPLES

<130> JNU-REM |

<160> 1

<170> PatentIn version 3.1

<210> 1 |
<211> 1477
<212> PRT
<213> Rattus norvegicus

<400> 1 |

Met Lys Lys Asp Arg Glu Ala Gln Leu Cys Leu Phe Ser Ala Leu Leu
1   5   10   15

Ala Phe Leu Pro Phe Ala Ser Leu Leu Asn Gly Asn Ser Lys Tyr Met
            20   25   30

Val Leu Val Pro Ser Gln Leu Tyr Thr Glu Thr Pro Glu Lys Ile Cys
        35   40   45

Leu His Leu Tyr His Leu Asn Glu Thr Val Thr Val Thr Ala Ser Leu
    50   55   60

Ile Ser Gln Arg Gly Thr Arg Lys Leu Phe Asp Glu Leu Val Val Asp
65   70   75   80

Lys Asp Leu Phe His Cys Val Ser Phe Thr Ile Pro Arg Leu Pro Ser
            85   90   95

Ser Glu Glu Glu Glu Ser Leu Asp Ile Asn Ile Glu Gly Ala Lys His
            100   105   110

Lys Phe Ser Glu Arg Arg Val Val Leu Val Lys Asn Lys Glu Ser Val
        115   120   125

Val Phe Val Gln Thr Asp Lys Pro Met Tyr Lys Pro Gly Gln Ser Val
    130   135   140

```
Lys Phe Arg Val Val Ser Met Asp Lys Asn Leu His Pro Leu Asn Glu
145             150         155             160

Leu Phe Pro Leu Ala Tyr Ile Glu Asp Pro Lys Met Asn Arg Ile Met
            165             170             175

Gln Trp Gln Asp Val Lys Thr Glu Asn Gly Leu Lys Gln Leu Ser Phe
            180             185             190

Ser Leu Ser Ala Glu Pro Ile Gln Gly Pro Tyr Lys Ile Val Ile Leu
            195             200             205

Lys Gln Ser Gly Val Lys Glu Glu His Ser Phe Thr Val Met Glu Phe
            210             215             220

Val Leu Pro Arg Phe Gly Val Asp Val Lys Val Pro Asn Ala Ile Ser
225             230             235             240

Val Tyr Asp Glu Ile Ile Asn Val Thr Ala Cys Ala Thr Tyr Thr Tyr
                245             250             255

Gly Lys Pro Val Pro Gly His Val Lys Ile Ser Leu Cys His Gly Asn
            260             265             270

Pro Thr Phe Ser Ser Glu Thr Lys Ser Gly Cys Lys Glu Glu Asp Ser
            275             280             285

Arg Leu Asp Asn Asn Gly Cys Ser Thr Gln Glu Val Asn Ile Thr Glu
            290             295             300

Phe Gln Leu Lys Glu Asn Tyr Leu Lys Met His Gln Ala Phe His Val
305             310             315             320

Asn Ala Thr Val Thr Glu Glu Gly Thr Gly Ser Glu Phe Ser Gly Ser
            325             330             335

Gly Arg Ile Glu Val Glu Arg Thr Arg Asn Lys Phe Leu Phe Leu Lys
            340             345             350

Ala Asp Ser His Phe Arg His Gly Ile Pro Phe Phe Val Lys Val Arg
            355             360             365

Leu Val Asp Ile Lys Gly Asp Pro Ile Pro Asn Glu Gln Val Leu Ile
            370             375             380
```

```
Lys Ala Arg Asp Ala Gly Tyr Thr Asn Ala Thr Thr Thr Asp Gln His
385             390             395             400

Gly Leu Ala Lys Phe Ser Ile Asp Thr Asn Gly Ile Ser Asp Tyr Ser
            405             410             415

Leu Asn Ile Lys Val Tyr His Lys Glu Glu Ser Ser Cys Ile His Ser
            420             425             430

Ser Cys Thr Ala Glu Arg His Ala Glu Ala His His Thr Ala Tyr Ala
            435             440             445

Val Tyr Ser Leu Ser Lys Ser Tyr Ile Tyr Leu Asp Thr Glu Ala Gly
    450             455             460

Val Leu Pro Cys Asn Gln Ile His Thr Val Gln Ala His Phe Ile Leu
465             470             475             480

Lys Gly Gln Val Leu Gly Val Leu Gln Gln Ile Val Phe His Tyr Leu
            485             490             495

Val Met Ala Gln Gly Ser Ile Leu Gln Thr Gly Asn His Thr His Gln
            500             505             510

Val Glu Pro Gly Glu Ser Gln Val Gln Gly Asn Phe Ala Leu Glu Ile
            515             520             525

Pro Val Glu Phe Ser Met Val Pro Val Ala Lys Met Leu Ile Tyr Thr
    530             535             540

Ile Leu Pro Asp Gly Glu Val Ile Ala Asp Ser Val Lys Phe Gln Val
545             550             555             560

Glu Lys Cys Leu Arg Asn Lys Val His Leu Ser Phe Ser Pro Ser Gln
            565             570             575

Ser Leu Pro Ala Ser Gln Thr His Met Arg Val Thr Ala Ser Pro Gln
            580             585             590

Ser Leu Cys Gly Leu Arg Ala Val Asp Gln Ser Val Leu Leu Gln Lys
    595             600             605
```

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```
Pro Glu Ala Glu Leu Ser Pro Ser Leu Ile Tyr Asp Leu Pro Gly Met
    610                 615             620
```

```
Gln Asp Ser Asn Phe Ile Ala Ser Ser Asn Asp Pro Phe Glu Asp Glu
625                 630             635             640
```

```
Asp Tyr Cys Leu Met Tyr Gln Pro Ile Ala Arg Glu Lys Asp Val Tyr
            645             650             655
```

```
Arg Tyr Val Arg Glu Thr Gly Leu Met Ala Phe Thr Asn Leu Lys Ile
            660             665             670
```

```
Lys Leu Pro Thr Tyr Cys Asn Thr Asp Tyr Asp Met Val Pro Leu Ala
        675             680             685
```

```
Val Pro Ala Val Ala Leu Asp Ser Ser Thr Asp Arg Gly Met Tyr Glu
    690             695             700
```

```
Ser Leu Pro Val Val Ala Val Lys Ser Pro Leu Pro Gln Glu Pro Pro
705             710             715             720
```

```
Arg Lys Asp Pro Pro Pro Lys Asp Pro Val Ile Glu Thr Ile Arg Asn
            725             730             735
```

```
Tyr Phe Pro Glu Thr Trp Ile Trp Asp Leu Val Thr Val Asn Ser Ser
            740             745             750
```

```
Gly Val Thr Glu Leu Glu Met Thr Val Pro Asp Thr Ile Thr Glu Trp
            755             760             765
```

```
Lys Ala Gly Ala Leu Cys Leu Ser Asn Asp Thr Gly Leu Gly Leu Ser
    770             775             780
```

```
Ser Val Ala Ser Phe Gln Ala Phe Gln Pro Phe Phe Val Glu Leu Thr
785             790             795             800
```

```
Met Pro Tyr Ser Val Ile Arg Gly Glu Ala Phe Thr Leu Lys Ala Thr
            805             810             815
```

```
Val Leu Asn Tyr Leu Pro Thr Ser Leu Pro Met Ala Val Leu Leu Glu
            820             825             830
```

```
Ala Ser Pro Asp Phe Thr Ala Val Pro Val Glu Asn Asn Gln Asp Ser
    835             840             845
```

```
Tyr Cys Leu Gly Ala Asn Gly Arg His Thr Ser Ser Trp Leu Val Thr
    850             855             860
```

```
Pro Lys Ser Leu Gly Asn Val Asn Phe Ser Val Ser Ala Glu Ala Arg
865             870             875             880
```

```
Gln Ser Pro Gly Pro Cys Gly Ser Glu Val Ala Thr Val Pro Glu Thr
            885             890             895
```

```
Gly Arg Lys Asp Thr Val Val Lys Val Leu Ile Val Glu Pro Glu Gly
            900             905             910
```

```
Ile Lys Lys Glu His Thr Phe Ser Ser Leu Leu Cys Ala Ser Asp Ala
    915             920             925
```

```
Glu Leu Ser Glu Thr Leu Ser Leu Leu Leu Pro Pro Thr Val Val Lys
    930             935             940
```

```
Asp Ser Ala Arg Ala His Phe Ser Val Met Gly Asp Ile Leu Ser Ser
945             950             955             960
```

```
Ala Ile Lys Asn Thr Gln Asn Leu Ile Gln Met Pro Tyr Gly Cys Gly
            965             970             975
```

```
Glu Gln Asn Met Val Leu Phe Ala Pro Asn Ile Tyr Val Leu Lys Tyr
            980             985             990
```

```
Leu Asn Glu Thr Gln Gln Leu Thr  Glu Lys Ile Lys Ser  Lys Ala Leu
        995             1000             1005
```

```
Gly Tyr  Leu Arg Ala Gly Tyr  Gln Arg Glu Leu Asn  Tyr Lys His
    1010             1015             1020
```

```
Lys Asp  Gly Ser Tyr Ser Ala  Phe Gly Asp His Asn  Gly Gln Gly
    1025             1030             1035
```

```
Gln Gly  Asn Thr Trp Leu Thr  Ala Phe Val Leu Lys  Ser Phe Ala
    1040             1045             1050
```

```
Gln Ala  Arg Ala Phe Ile Phe  Ile Asp Glu Ser His  Ile Thr Asp
    1055             1060             1065
```

```
Ala Phe  Thr Trp Leu Ser Lys  Gln Gln Lys Asp Ser  Gly Cys Phe
    1070             1075             1080

Arg Ser  Ser Gly Ser Leu Leu  Asn Asn Ala Met Lys  Gly Gly Val
    1085             1090             1095

Asp Asp  Glu Ile Thr Leu Ser  Ala Tyr Ile Thr Met  Ala Leu Leu
    1100             1105             1110

Glu Ser  Ser Leu Pro Asp Thr  Asp Pro Val Val Ser  Lys Ala Leu
    1115             1120             1125

Ser Cys  Leu Glu Ser Ser Trp  Glu Asn Ile Glu Gln  Gly Gly Asn
    1130             1135             1140

Gly Ser  Phe Val Tyr Thr Lys  Ala Leu Met Ala Tyr  Ala Phe Ala
    1145             1150             1155

Leu Ala  Gly Asn Gln Glu Lys  Arg Asn Glu Ile Leu  Lys Ser Leu
    1160             1165             1170

Asp Lys  Glu Ala Ile Lys Glu  Asp Asn Ser Ile His  Trp Glu Arg
    1175             1180             1185

Pro Gln  Lys Pro Thr Lys Ser  Glu Gly Tyr Leu Tyr  Thr Pro Gln
    1190             1195             1200

Ala Ser  Ser Ala Glu Val Glu  Met Ser Ala Tyr Val  Val Leu Ala
    1205             1210             1215

Arg Leu  Thr Ala Gln Pro Ala  Pro Ser Pro Glu Asp  Leu Ala Leu
    1220             1225             1230

Ser Met  Gly Thr Ile Lys Trp  Leu Thr Lys Gln Gln  Asn Ser Tyr
    1235             1240             1245

Gly Gly  Phe Ser Ser Thr Gln  Asp Thr Val Val Ala  Leu Asp Ala
    1250             1255             1260

Leu Ser  Lys Tyr Gly Ala Ala  Thr Phe Ser Lys Ser  Gln Lys Thr
    1265             1270             1275

Pro Ser  Val Thr Val Gln Ser  Ser Gly Ser Phe Ser  Gln Lys Phe
    1280             1285             1290
```

```
Gln Val  Asp Lys Ser Asn Arg  Leu Leu Leu Gln Gln  Val Ser Leu
    1295             1300             1305

Pro Tyr  Ile Pro Gly Asn Tyr  Thr Val Ser Val Ser  Gly Glu Gly
    1310             1315             1320

Cys Val  Tyr Ala Gln Thr Thr  Leu Arg Tyr Asn Val  Pro Leu Glu
    1325             1330             1335

Lys Gln  Gln Pro Ala Phe Ala  Leu Lys Val Gln Thr  Val Pro Leu
    1340             1345             1350

Thr Cys  Asn Asn Pro Lys Gly  Gln Asn Ser Phe Gln  Ile Ser Leu
    1355             1360             1365

Glu Ile  Ser Tyr Met Gly Ser  Arg Pro Ala Ser Asn  Met Val Ile
    1370             1375             1380

Ala Asp  Val Lys Met Leu Ser  Gly Phe Ile Pro Leu  Lys Pro Thr
    1385             1390             1395

Val Lys  Lys Leu Glu Arg Leu  Gly His Val Ser Arg  Thr Glu Val
    1400             1405             1410

Thr Thr  Asn Asn Val Leu Leu  Tyr Leu Asp Gln Val  Thr Asn Gln
    1415             1420             1425

Thr Leu  Ser Phe Ser Phe Ile  Ile Gln Gln Asp Ile  Pro Val Lys
    1430             1435             1440

Asn Leu  Gln Pro Ala Ile Val  Lys Val Tyr Asp Tyr  Tyr Glu Thr
    1445             1450             1455

Asp Glu  Val Ala Phe Ala Glu  Tyr Ser Ser Pro Cys  Ser Ser Asp
    1460             1465             1470

Asp Gln  Asn Val
    1475
```